

RESOLUTION NO. 2020-32

A RESOLUTION OF THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AUTHORIZING THE VILLAGE MANAGER TO ISSUE A WORK ORDER TO EAC CONSULTING, INC. FOR COASTAL ENGINEERING SERVICES FOR THE BEACH NOURISHMENT MAINTENANCE PROJECT; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Village of Key Biscayne (“Village”) issued Request for Qualifications No. 2016-02-09 (“RFQ”) for continuing professional engineering services; and

WHEREAS, pursuant to the RFQ, the Village Council selected EAC Consulting, Inc. (“Consultant”) as one of the consultants to provide continuing professional engineering services and authorized the Village Manager to execute an agreement with Consultant; and

WHEREAS, Consultant has provided a proposal, attached hereto as Exhibit “A,” (the “Proposal”) to perform coastal engineering services for the beach nourishment maintenance project (the “Project”); and

WHEREAS, the Village Council desires to authorize the Village Manager to negotiate and issue a work order for the Project consistent with the Proposal attached hereto as Exhibit “A” and the professional services agreement entered into between the Village and Consultant; and

WHEREAS, the Village Council finds that this Resolution is in the best interest and welfare of the residents of the Village.

NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AS FOLLOWS:

Section 1. Recitals Adopted. That each of the above-stated recitals are hereby adopted, confirmed, and incorporated herein.

Section 2. **Authorization.** The Village Manager is hereby authorized to negotiate and issue a work order to Consultant for the Project consistent with the Proposal attached hereto as Exhibit "A" in an amount not to exceed \$139,987.


Section 3. **Effective Date.** That this Resolution shall be effective immediately upon adoption.

PASSED and ADOPTED this 19th day of May 2020.

ATTEST:



PETER J. KULPA
INTERIM VILLAGE CLERK



MICHAEL W. DAVEY, MAYOR



APPROVED AS TO FORM AND LEGAL SUFFICIENCY.



WEISS SEROTA HELFMAN COLE & BIERMAN, P.L.
VILLAGE ATTORNEY

March 3, 2020

Andrea Agha,
aagha@keybiscayne.fl.gov
Village Manager
Village of Key Biscayne
88 W. McIntyre St, Suite 210
Key Biscayne, FL 33149

Re: Village Key Biscayne – Sand Replacement / Beach Nourishment (Year 3)

Dear Ms. Agha:

EAC Consulting, Inc. (EAC), as part of its Continuing Services Contract with the Village's respectfully submits these services relative to the proposed Village of Key Biscayne Beach Nourishment Maintenance project (Year 3). The Project includes the restoration of the beach using the design template that was authorized previously for beach compatible sand placement by the Florida Department of Environmental Protection (FDEP) between reference monument R-101 and R-108 using fill material obtained from one or more of the approved upland sand mines. The scope of services will be provided to the Village by the EAC with participation from our sub consultant - **Moffatt & Nichol, Inc** - providing coastal engineering services.

Our scope of services comprises of the following specific tasks and items:

Statement of Work (SOW)

The SOW outlines the details of the professional engineering services to plan, design and develop deliverable documents for the project and comprises of the following tasks:

Task 1 – Year 3 Escarpment Monitoring/Tilling

Our team shall coordinate with a VKB procured beach cleaning contractor to complete escarpment monitoring and tilling of the beach that is required for compliance with local, state and federal permits. The escarpment monitoring must be completed within 30 days prior to April 1st and tilling must also be completed before marine turtle nesting season. U.S. Fish and Wildlife Service (FWS) and Florida Fish and Wildlife Conservation Commission staff have noted a preference for completion of the tilling as early as possible, as leather back turtles often start nesting in mid-March in Miami-Dade County.

Our subconsultant Moffat and Nichol, Inc shall maintain contact with the beach contractor and the Village to coordinate the schedule and follow up with assessing the beach after completion of the tilling. A summary report will be compiled with photographs of the tilling and of the tilled beach. The report will be distributed to the agencies for permit compliance. This scope of services assumes that no marine turtle nesting conflicts or other issues will arise during the escarpment leveling and tilling process; if additional coordination is required for any reason, the Village shall be advised, and these services will be provided under an addendum or supplemental scope of work.

Task 2 – Beach Fill Permit Sketches

Our team shall compile permit sketches for the planned beach fill event. Beach profile data from the summer/fall 2019 monitoring event shall be utilized in the preparation of the permit sketches. Permit sketches will be compiled on 11" X 17" sheets and will include the existing conditions, beach fill plan, fill sections, and construction staging details. Our team shall prepare an opinion of probable construction cost based on the estimated volume.

Deliverables:	Environmental Permit Sketches (11" X 17" sheets)
	Opinion of Probable Construction Cost (spreadsheet)

Task 3 – Coastal Permitting

Please refer to Fee Proposal submitted by our subconsultant – **Moffat & Nichol, Inc** provided in Attachment 2 of this proposal.

In general, it is assumed that no permit modifications are required beyond those noted herein. It is assumed that the no change in beach access/staging location will be proposed. There have been recent issues with the *E.R. Jahna Ortona Mine* sand source not meeting South Florida beach project sediment QA/QC specifications; therefore, pursuit of authorization for additional sand mine sources is included in Task 3(b). It is assumed that the Project will comply with the 2011 Florida Statewide Programmatic Biological Opinion (BO) authorized for Florida by the FWS, as required as a condition of the Department of the Army (Corps) permit.

The level of effort required to negotiate approval of the beach maintenance event authorizations with the environmental permitting agencies may ultimately be affected by several external variables, such as potential environmental resource impact concerns and associated commenting agency Requests for Additional Information (RAI), additional Endangered Species Act consultation requirements, compliance issues related to previous beach re-nourishment events, public comments/objections, etc. Agency staff workload, recent regulatory precedent, and policy trends may also affect the time and level of effort required to secure Project authorizations. Permit compliance/administration will be provided under a separate scope of services upon confirmation of special conditions for the proposed beach fill event.

- a) **Maintenance Event Authorization Requests:** Our team shall prepare and submit letters requesting additional sand source and beach maintenance event authorization under FDEP Permit No. 0160846-JC, Corps Permit No. 199904294 (IP-AG) and DERM Permit No. 2010-CLI-PER-00088, as required for authorization of the proposed Project. The Beach Fill Permit Sketches and additional Project information regarding construction methodology, schedule, etc. will be attached with the letters. Meetings required with the Village and/or agency staff shall be provided under Task 4.
- b) **Approval of Additional Sand Sources:** Currently, the only upland mine sand source authorized for the Project is from the *E.R. Jahna Ortona Mine*. There have been recent issues with the Ortona Mine sand source not meeting South Florida beach project sediment QA/QC specifications, including the Project specifications. Our team shall submit permit modification requests to the Corps, FDEP and DERM asking for authorization of up to two (2) additional upland mine sand sources concurrently with the Maintenance Event Authorization Requests. The two (2) upland mine sand sources that are recommended for evaluation are 1) the Vulcan Materials Witherspoon Mine and 2) the Garcia Mine, based on recent data indicating compliance of the "Beach Sand" products from these mines with the Project's approved Sediment QA/QC Plan. If the permitting agencies require additional sampling/testing of in situ beach material on the Village's beaches, these services shall be provided under Task 3(c).
- c) **Sand Compatibility Analysis (if required):** If required by one or more regulatory agency for the current in-situ sand on the Village of Key Biscayne's beaches to be analysed for compatibility with the proposed 2 additional upland mined sand sources, our team personnel shall collect up to eight (8) sand samples and submit them to a qualified geotechnical laboratory for analysis in accordance with standard regulatory agency beach sand characterization criteria. Our coastal engineering subconsultant shall coordinate with the geotechnical lab regarding format of reporting for the analysis.
- d) **FDEP Processing:** Our coastal engineering subconsultant shall confer with FDEP staff following submittal of the re-nourishment event authorization request to advise them of the details of the Project design and to address staff comments or RAIs. This scope includes responding to one (1) comprehensive FDEP RAI regarding the Project. Our coastal engineering subconsultant shall maintain telephone contact with agency staff, including the FDEP and FWC, if required, to expedite their review and processing of the authorization request. Our coastal engineering subconsultant shall confer with the Village as to questions, revisions, or additional items that may be required by agency staff.

- e) **Miami-Dade DERM Processing:** Our team shall confer with DERM staff following submittal of the re-nourishment event authorization request to advise them of the details of the Project and to address staff comments or Completeness Summaries (CS). This scope assumes responding to one (1) comprehensive DERM CS regarding the Project. Our coastal engineering subconsultant shall maintain telephone contact with agency staff to expedite their review and processing of the permit modification. Our coastal engineering subconsultant shall confer with the Village as to questions, revisions, or additional items that may be required by agency staff.
- f) **U.S. Army Corps of Engineers Processing:** Our team shall confer with Corps staff following submittal of the re-nourishment event authorization request to advise them of the details of the Project and to address staff comments or RAIs. This scope includes responding to one (1) comprehensive Corps RAI regarding the Project. Our coastal engineering subconsultant shall maintain telephone contact with agency staff, including the Corps, NMFS and the FWS to expedite their review and processing of the permit application. Our coastal engineering subconsultant shall confer with the Village as to questions, revisions, or additional items that may be required by agency staff.
- g) **Agency Pre-Construction Meetings:** As required in the permit conditions, our team shall coordinate agency pre-construction meetings with appropriate attendees to review the permit scopes/conditions, Project schedule and other logistical items to support compliance with permit conditions during construction. This scope of work includes one (1) onsite pre-construction meeting with Miami-Dade County DERM staff and the Miami-Dade County marine turtle permit holder. This task is one (1) pre-construction teleconference with FDEP and FWC staff. Corps staff may participate in either the onsite meeting or the teleconference, at their discretion.

Task 4 – Coordination Meetings

Our team shall attend meetings related to the Project as authorized by the Village. Meetings may include attendance at Commission meetings, meetings with Town staff and meetings with local, state and federal agencies. These meetings will be provided on an hourly basis in accordance with the approved VKB Professional Services Agreement established hourly rates.

Task 5 – Year 2020 FEMA Coordination & Consulting

Our coastal engineering subconsultant shall continue to coordinate with FEMA on the funding relative to impacts from Hurricane Irma. Our coastal engineering subconsultant shall participate in regular conference calls with FEMA representatives to track the process for establishment of the Project Worksheet (PWS). In addition, quarterly progress reports will be compiled and submitted to FEMA.

Task 6 – Construction Documents (Analyses, Plans & Specifications)

- a) **Coastal Engineering Analysis:** Based on the design completed under Task 2 services, our team shall evaluate the Equilibrium Toe of Fill (ETOF) and optimize the Project conceptual design to avoid impacts to nearshore ecological resources based upon the anticipated fill volume. The FDEP requires the ETOF analysis to be performed utilizing two (2) accepted industry methods: 1) Profile Translation and 2) Modified Dean method. The Dean method will incorporate sand properties from both the existing beach sand and the proposed upland sand source. The ETOF will be evaluated based upon the most recent available seagrass edge data. The fill templates will be further refined based on the analysis results. The methods and results of the modeling will be incorporated into a coastal engineering report defining the ETOF for the Project area, which will be submitted to the agencies as part of the permitting process.

Please note that If additional modeling iterations are required by the agencies, this shall be addressed pursuant to an addendum or supplemental scope of services.

Deliverables: ETOF Coastal Engineering Report

- b) **Construction Plans:** Our team shall complete the engineering design for the Project, develop or prepare construction drawings. To expedite and facilitate the project, our team shall utilize the physical and biological monitoring data to be collected in the summer 2020, so separate surveys will not be conducted. The survey data from this annual monitoring shall be utilized for both permit compliance and for the drawings and will be consistent with the design authorized by the environmental agency permits. The construction drawings will include a construction baseline, fill template, cross-sections, staging/access and details. The construction drawings shall also reference anticipated special permit conditions. Please note that plan addenda may be required, as construction drawings shall be completed prior to issuance of the environmental permits. In addition, the construction drawings shall be signed and sealed by a licensed Florida Professional Engineer for submittal.

Deliverables: Construction Drawings at 90% and 100% levels of completion, 22" X 34" sheets PDF and six (6) hard copies

- c) **Technical Specifications:** Our team will provide Construction Specifications Institute (CSI) Technical Specifications for beach nourishment and specifications for applicable marine environmental sections. In addition, a form with estimated construction quantities will be provided along with recommended contractor qualifications. The specifications will be provided in PDF format, with following sections anticipated

- I. Summary of Work
- II. Measurement and Payment
- III. Beach Fill Placement – Contractor Quality Control
- IV. Environmental Protection
- V. Turbidity Monitoring
- VI. Vibration Monitoring Requirements for Existing Structures
- VII. Beach Fill

Deliverables: Technical Specifications PDF

Please note that the preparation of bid specifications is not included in this scope of work. If required by the Village, EAC shall submit a separate fee proposal to handle this supplemental scope of services.

Task 7 – Florida DEP Local Government Funding Request (LGFR)

- a) **2021/2022 Beach Funding Application:** Our subconsultant shall prepare a FDEP LGFR for the 2021/2022 fiscal year for the Project. The Village shall provide information regarding available municipal beach management support staff and a Resolution noting support of the Project, willingness to serve as local sponsor, ability to provide the local cost share, and identification of a dedicated funding source. The Village shall provide our subconsultant with available data regarding public beach access and parking spaces, location of public restrooms in proximity to the beach, location of public lodging establishments and land use information. Our subconsultant shall utilize Project drawings along with permitting, design, construction administration, and monitoring costs associated with the 2020 truck haul nourishment for submittal with the LGFR. Our subconsultant shall compile the necessary data and submit the scope of work, schedule, contract copies and other required exhibits to the FDEP Beach Management Assistance Funding Program in support of this funding request.
- b) **Beach Funding Coordination Meetings:** Our subconsultant shall attend meetings or participate in telephone conference calls related to the Project as authorized by the Village. Meetings may include attendance at Commission meetings, meetings with Village staff and meetings with state agencies.

Schedule

The schedule for the services is approximately ten (10) months.

The schedule is dependent on the maintenance event authorization time frames with the local, state and federal agencies. Engineering design and contract document preparation will proceed either ahead of or concurrently with the construction bid process, which may be completed prior to issuance of final permits. The completion of the engineering design is also depending on the Village authorizing the physical and biological monitoring over the summer, 2020.

This data is required for the final design as the most recent survey data available is from 2019.

Compensation

Compensation for the varying tasks is on a lump sum basis that is based on the following breakdown and will be invoiced on a percentage basis in accordance with the completion at the time of billing.

1. Year 3 Escarpment Monitoring/Tilling	\$ 2,300.00
2. Beach Fill Permit Sketches	\$ 18,433.00
3. Coastal Permitting	\$ 38,560.00
4. Coordination Meetings	\$ 6,058.00
5. Year 2020 FEMA Coordination & Consulting	\$ 5,400.00
6. Construction Documents (Analyses, Plans & Specifications)	\$ 55,886.00
7. Florida DEP Local Government Funding Request (LGFR)	\$ 11,200.00
Sub-Total:	\$ 137,837.00
Printing/Reimbursable(s):	\$ 2,150.00
Total Compensation for this Work Order:	\$ 139,987.00

It is our understanding that this statement of work will be undertaken under a work order to be issued subject to the terms and conditions of the professional services agreement entered between the Village and EAC Consulting, Inc. We are ready begin working on this assignment. If the above fee proposal and the terms above are acceptable to you, please provide us with a Work Authorization /Work Order and Notice to Proceed (NTP).

Please feel free to contact me if any clarifications are required. Thank you for the opportunity to be of service to the Village of Biscayne.

Sincerely,
EAC Consulting, Inc



Michael Adeife
Senior Vice President

c.c: File
Jake Ozyman (VKB PW Director)
Tim Blankenship (Moffat & Nichol)

AGREED AND ACCEPTED	
By: _____ Andrea Agha, Village Manager	_____ Date
_____, 2020 Notice to Proceed Date	

Attachments: Attachment 1 – EAC Fee Tabulation
Attachment 2 – Moffatt & Nichol, Inc Proposal Letter

Exhibit "A"



2937 SW 27th Avenue, Suite 101A
Miami, FL 33133

(305) 230-1924
www.moffattnichol.com

9699-13

March 2, 2020

Mr. Mike Adeife
EAC Consulting, Inc.
5959 Blue Lagoon Drive, Suite 410
Miami, FL 33126

Via email: madeife@eacconsult.com

**Subject: CONSULTING SERVICES RELATIVE TO THE VILLAGE OF KEY BISCAYNE BEACH
RENOURISHMENT, MIAMI-DADE COUNTY, FLORIDA**

Dear Mr. Adeife:

This is to submit a proposal for consulting services relative to the proposed Village of Key Biscayne Beach Renourishment Project (Project). Moffatt & Nichol (M&N) has worked with the Village of Key Biscayne (Village) and with FEMA to estimate erosion losses due to Hurricane Irma. M&N assisted the Village with an assessment of the beach after the hurricane and assisted with securing funding from FEMA for the eroded beach volume. A truck haul beach nourishment consisting of approximately 23,000 cubic yards (cy) within the authorized template between Florida Department of Environmental Protection (FDEP) reference monuments R-101 and R-108 is proposed. Depending on the amount of erosion, additional beach fill may be placed. Engineering design and environmental permitting tasks are required for implementation of the Project as planned in 2020. The following work tasks outline the field investigation, design and environmental permitting scope of work for the proposed truck haul renourishment.

SCOPE OF SERVICES

Part 1 – Year 3 Escarpment Monitoring/Tilling

M&N will coordinate with the beach cleaning contractor to complete escarpment monitoring and tilling of the beach that is required for compliance with local, state and federal permits. The escarpment monitoring must be completed within 30 days prior to April 1st and tilling must also

Exhibit "A"

be completed before marine turtle nesting season. U.S. Fish and Wildlife Service (FWS) and Florida Fish and Wildlife Conservation Commission staff have noted a preference for completion of the tilling as early as possible, as leather back turtles often start nesting in mid-March in Miami-Dade County. M&N will maintain contact with the beach contractor and the Village to coordinate the schedule, and M&N will assess the beach after completion of the tilling. A summary report will be compiled with photographs of the tilling and of the tilled beach. The report will be distributed to the agencies for permit compliance. This scope of services assumes that no marine turtle nesting conflicts or other issues will arise during the escarpment leveling and tilling process; if additional coordination is required for any reason, the Client will be advised and these services will be provided under an addendum scope of work.

Part 2 - Beach Fill Permit Sketches

M&N will compile permit sketches for the planned beach fill event. Beach profile data from the summer/fall 2019 monitoring event will be utilized in the preparation of the permit sketches. Permit sketches will be compiled on 11" X 17" sheets and will include the existing conditions, beach fill plan, fill sections, and construction staging details. M&N will prepare an opinion of probable construction cost based on the estimated volume.

Deliverables: Environmental Permit Sketches (11" X 17" sheets)
Opinion of Probable Construction Cost (spreadsheet)

Part 3 – Coastal Permitting

It is assumed that no permit modifications are required beyond those noted herein. It is assumed that the no change in beach access/staging location will be proposed. There have been recent issues with the E.R. Jahna Ortona Mine sand source not meeting South Florida beach project sediment QA/QC specifications; therefore, pursuit of authorization for additional sand mine sources is included in Part 3(b). It is assumed that the Project will comply with the 2011 Florida Statewide Programmatic Biological Opinion (BO) authorized for Florida by the FWS, as required as a condition of the Department of the Army (Corps) permit.

The level of effort required to negotiate approval of the beach maintenance event authorizations with the environmental permitting agencies may ultimately be affected by several external variables, such as potential environmental resource impact concerns and associated commenting agency Requests for Additional Information (RAI), additional Endangered Species Act consultation requirements, compliance issues related to previous beach renourishment events, public comments/objections, etc. Agency staff workload, recent regulatory precedent, and policy

trends may also affect the time and level of effort required to secure Project authorizations. Permit compliance/administration will be provided under a separate scope of services upon confirmation of special conditions for the proposed beach fill event.

- a. **Maintenance Event Authorization Requests:** M&N will prepare and submit letters requesting additional sand source and beach maintenance event authorization under FDEP Permit No. 0160846-JC, Corps Permit No. 199904294 (IP-AG) and DERM Permit No. 2010-CLI-PER-00088, as required for authorization of the proposed Project. The Beach Fill Permit Sketches and additional Project information regarding construction methodology, schedule, etc. will be attached with the letters. The Village will directly pay all required permit modification fees. Upon receipt of preliminary agency questions or comments and the first round of formal Requests for Additional Information and Completeness Summaries, M&N will confer with the Village as to the issues and additional items that are required by agency staff and update the Project strategy, schedule and action items required for authorization of the Project. M&N will maintain clear communication with the Village regarding permitting progress. Meetings required with the Village and/or agency staff will be provided under Part 4 services.
- b. **Approval of Additional Sand Sources:** Currently, the only upland mine sand source authorized for the Project is from the E.R. Jahna Ortona Mine. As noted above, there have been recent issues with the Ortona Mine sand source not meeting South Florida beach project sediment QA/QC specifications, including the Project specifications. M&N will submit permit modification requests to the Corps, FDEP and DERM asking for authorization of up to two (2) additional upland mine sand sources concurrently with the Maintenance Event Authorization Requests. The two (2) upland mine sand sources that are recommended by M&N for evaluation are 1) the Vulcan Materials Witherspoon Mine and 2) the Garcia Mine, based on recent data indicating compliance of the “Beach Sand” products from these mines with the Project’s approved Sediment QA/QC Plan. If the permitting agencies require additional sampling/testing of in situ beach material on the Village’s beaches, these services will be provided under Part 3(c). M&N will obtain and review current sediment samples and characteristics data from the mines for which the Village would like to seek permitting agency approval as additional sand sources.
- c. **Sand Compatibility Analysis (if required):** If it is required by one or more regulatory agency for the current in-situ sand on the Village of Key Biscayne’s beaches to be analysed for compatibility with the proposed 2 additional upland mined sand sources, M&N staff will collect up to eight (8) sand samples and submit them to a qualified geotechnical laboratory for analysis in accordance with standard regulatory agency beach sand characterization criteria. M&N will coordinate with the geotechnical lab regarding format of reporting for the

analysis. If required, M&N will write a Project/site-specific beach compatibility opinion letter for submittal to the permitting agencies in support of the requested additional sand source approvals. If the regulatory agencies require collection and analysis of a greater number of samples for any reason, the Client will be advised regarding additional scope/cost and these will be addressed under an addendum scope of services.

- d. **FDEP Processing:** M&N will confer with FDEP staff following submittal of the renourishment event authorization request to advise them of the details of the Project design and to address staff comments or RAIs. This scope includes responding to one (1) comprehensive FDEP RAI regarding the Project. M&N will maintain telephone contact with agency staff, including the FDEP and FWC, if required, to expedite their review and processing of the authorization request. M&N will confer with the Village as to questions, revisions, or additional items that may be required by agency staff. M&N will represent the proposed Project before agency staff to assist the Village in securing FDEP approval for the maintenance event. This fee estimate provides for approximately 48 hours (will vary according to staff rate; see Rate Sheet) of authorization processing coordination. Meetings required with the Village and/or agency staff will be provided under Part 4 services.
- e. **Miami-Dade DERM Processing:** M&N will confer with DERM staff following submittal of the renourishment event authorization request to advise them of the details of the Project and to address staff comments or Completeness Summaries (CS). This scope assumes responding to one (1) comprehensive DERM CS regarding the Project. M&N will maintain telephone contact with agency staff to expedite their review and processing of the permit modification. M&N will confer with the Village as to questions, revisions, or additional items that may be required by agency staff. M&N will represent the proposed Project before agency staff to assist the Village in securing a DERM approval for the maintenance event. This fee estimate provides for approximately 48 hours (will vary according to staff rate; see Rate Sheet) of authorization processing coordination. Meetings required with the Village and/or agency staff will be provided under Part 4 services.
- f. **U.S. Army Corps of Engineers Processing:** M&N will confer with Corps staff following submittal of the renourishment event authorization request to advise them of the details of the Project and to address staff comments or RAIs. This scope includes responding to one (1) comprehensive Corps RAI regarding the Project. M&N will maintain telephone contact with agency staff, including the Corps, NMFS and the FWS to expedite their review and processing of the permit application. M&N will confer with the Village as to questions, revisions, or additional items that may be required by agency staff. M&N will represent the proposed Project before agency staff to assist the Village in securing Corps approval for the

maintenance event. This fee estimate provides for approximately 48 hours (will vary according to staff rate; see Rate Sheet) of authorization processing coordination. Meetings required with the Village and/or agency staff will be provided under Part 4 services.

- g. Agency Pre-Construction Meetings:** As required in the permit conditions, M&N staff will coordinate agency pre-construction meetings with appropriate attendees to review the permit scopes/conditions, Project schedule and other logistical items to support compliance with permit conditions during construction. This scope of work includes one (1) onsite pre-construction meeting with Miami-Dade County DERM staff and the Miami-Dade County marine turtle permit holder. This task is one (1) pre-construction teleconference with FDEP and FWC staff. Corps staff may participate in either the onsite meeting or the teleconference, at their discretion. This fee estimate provides for approximately 18 hours (will vary according to staff rate; see Rate Sheet) of consulting services. Additional meetings required with the Village and/or agency staff will be provided under Part 4 services. Other permit compliance items will be addressed under a separate scope of services.

Part 4 – 2020 Beach Fill Event Meetings

M&N will attend meetings related to the Project as authorized by the Village. Meetings may include attendance at Commission meetings, meetings with Town staff and meetings with local, state and federal agencies. These meetings will be provided on an hourly basis in accordance with the approved Rate Sheet; approximately 30 hours (will vary according to staff rate; see Rate Sheet) are budgeted.

Part 5 - FEMA Consulting (2020)

M&N will continue to coordinate with FEMA on the funding relative to impacts from Hurricane Irma. M&N will participate in regular conference calls with FEMA representatives to track the process for establishment of the Project Worksheet (PWS). In addition, quarterly progress reports will be compiled and submitted to FEMA. Approximately 34 hours (will vary according to staff rate; see Rate Sheet) of consulting services are budgeted.

Part 6 – Construction Plans

- a. Coastal Engineering Analysis:** Based on the design completed under Part 2 services, M&N will evaluate the Equilibrium Toe of Fill (ETOF) and optimize the Project conceptual design to avoid impacts to nearshore ecological resources based upon the anticipated fill volume. The FDEP requires the ETOF analysis to be performed utilizing two (2) accepted industry methods:

1) Profile Translation and 2) Modified Dean method. The Dean method will incorporate sand properties from both the existing beach sand and the proposed upland sand source. The ETOF will be evaluated based upon the most recent available seagrass edge data. The fill templates will be further refined based on the analysis results. The methods and results of the modeling will be incorporated into a coastal engineering report defining the ETOF for the Project area, which will be submitted to the agencies as part of the permitting process. If additional modeling iterations are required by the agencies, this will be addressed pursuant to an addendum scope of services.

Deliverables: ETOF Coastal Engineering Report

- b. Construction Plans:** M&N will complete the coastal engineering design for the Project and prepare construction drawings. To save costs, M&N will utilize the physical and biological monitoring data to be collected in the summer, 2020 so separate surveys will not be conducted. The survey data from this annual monitoring will be utilized for both permit compliance and for the drawings, and will be consistent with the design authorized by the environmental agency permits. The construction drawings will include a construction baseline, fill template, cross-sections, staging/access and details. The dune(s) will be designed for fill placement; however, the Village's dune consultant will complete any dune vegetation design. These services can be provided by M&N under an addendum scope of services. The construction drawings will also reference anticipated special permit conditions. Please note that plan addenda may be required, as construction drawings will most likely be completed prior to issuance of the environmental permits. In addition, the construction drawings will be signed and sealed by a licensed Florida Professional Engineer for submittal.

Deliverables: Construction Drawings at 90% and 100% levels of completion, 22" X 34" sheets PDF and up to six (6) hard copies

- c. Technical Specifications:** M&N will provide Construction Specifications Institute (CSI) Technical Specifications for beach nourishment and specifications for applicable marine environmental sections. In addition, a form with estimated construction quantities will be provided along with recommended contractor qualifications. The specifications will be provided in PDF format, with following sections anticipated

- Summary of Work
- Measurement and Payment
- Beach Fill Placement – Contractor Quality Control

- Environmental Protection
- Turbidity Monitoring
- Vibration Monitoring Requirements for Existing Structures
- Beach Fill

Deliverables: Technical Specifications PDF

Part 7 – Florida DEP LGFR

- a. **2021/2022 Beach Funding Application:** M&N will prepare a FDEP LGFR for the 2021/2022 fiscal year for the Project. The Village will provide information regarding available municipal beach management support staff and a Resolution noting support of the Project, willingness to serve as local sponsor, ability to provide the local cost share, and identification of a dedicated funding source. The Village will provide M&N with available data regarding public beach access and parking spaces, location of public restrooms in proximity to the beach, location of public lodging establishments and land use information. M&N will utilize Project drawings along with permitting, design, construction administration, and monitoring costs associated with the 2020 truck haul nourishment for submittal with the LGFR. M&N will compile the necessary data and submit the scope of work, schedule, contract copies and other required exhibits to the FDEP Beach Management Assistance Funding Program in support of this funding request.
- b. **Beach Funding Coordination Meetings:** M&N will attend meetings or participate in telephone conference calls related to the Project as authorized by the Village. Meetings may include attendance at Commission meetings, meetings with Village staff and meetings with state agencies. Approximately ten (10) hours are budgeted for this effort. If additional meetings are required, these will be provided under an addendum scope of services.

GENERAL

Contract Terms

Refer to contract terms within the Subconsultant Agreement dated January 20, 2017, with EAC Consulting, Inc. While we make every effort to keep our fees within estimates quoted, additional costs may be incurred due to circumstances beyond our immediate control, including but not limited to, rule or procedural changes, Project team or agency staff delays, and legal actions.

Schedule

The schedule for the services is approximately ten (10) months, with the objective to begin beach fill construction by February 1, 2021, for completion of the Project prior to the May 1 start of the 2021 marine turtle nesting season. The schedule is dependent on the maintenance event authorization time frames with the local, state and federal agencies. Engineering design and contract document preparation will proceed either ahead of or concurrently with the construction bid process, which may be completed prior to issuance of final permits. The completion of the engineering design is also depending on the Village authorizing the physical and biological monitoring over the summer, 2020. This data is required for the final design as the most recent survey data available is from 2019.

Professional Fees and Expenses

Professional Fees are summarized in Table 1. Expenses will be invoiced at cost and are estimated at \$2,000.

Additional Services

As the permitting process progresses, M&N will compile an addendum scope of services for the preparation of contract documents, bidding assistance, construction administration, permit administration, during/post-construction monitoring, additional funding support services, additional meetings/coordination, etc.

If you wish for us to provide these services, please sign and return a copy of the enclosed Amendment to Agreement form which will serve as our Authorization to Proceed. Should you have any questions regarding this proposal, please do not hesitate to contact me at (786) 725-4180 or tblankenship@moffattnichol.com.

Sincerely,

Moffatt & Nichol, Inc.



Tim Blankenship, P.E.
Business Unit Leader

TKB:CJB:AW

Enclosure

Sub Mark-up	0%
ODC Mark-up	0%

Exhibit "A"